

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date
24 February 2005 (24.02.2005)

PCT

(10) International Publication Number
WO 2005/016245 A3

(51) International Patent Classification⁷: A61K 31/4745, 31/437, C07D 471/04, A61K 29/00, 35/00, 37/00

(US). FERGUSON, Colin, G. [CA/US]; 155 1st Ave #6, Salt Lake City, Utah 84103 (US).

(21) International Application Number:
PCT/US2004/018752

(74) Agents: WESTERN, M., Wayne et al.; Thorpe North & Western LLP, P.O.Box 1219, Sandy, UT 84091-1219 (US).

(22) International Filing Date: 14 June 2004 (14.06.2004)

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(25) Filing Language: English

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(26) Publication Language: English

Published:

(30) Priority Data:
60/478,221 13 June 2003 (13.06.2003) US

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

(71) Applicants (for all designated States except US): ECHELON BIOSCIENCES INCORPORATED [US/US]; 675 South Arapeen Drive, Suite 302, Salt Lake City, UT 84108 (US). COMGENEX, RT [HU/HU]; Bem RPK 33-34, H-1027 Budapest (HU).

(88) Date of publication of the international search report:
2 June 2005

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: COMPOUNDS HAVING INHIBITIVE ACTIVITY OF PHOSPHATIDYLINOSITOL 3-KINASE AND METHODS OF USE THEREOF

(57) Abstract: Compounds inhibiting phosphatidylinositol 3-kinase (PI 3-K) activities and methods of preparing and using thereof in treating diseases are disclosed. Compounds inhibiting PI 3-K activity and methods of using PI 3-K inhibitory compounds to inhibit cancer cell growth or to treat disorders of immunity and inflammation, in which PI 3-K plays a role in leukocyte function are also provided.

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date
24 February 2005 (24.02.2005)

PCT

(10) International Publication Number
WO 2005/016245 A2

(51) International Patent Classification⁷:

A61K

(21) International Application Number:

PCT/US2004/018752

(22) International Filing Date: 14 June 2004 (14.06.2004)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

60/478,221 13 June 2003 (13.06.2003) US

(71) Applicants (for all designated States except US): ECHELON BIOSCIENCES INCORPORATED [US/US]; 675 South Arapeen Drive, Suite 302, Salt Lake City, UT 84108 (US). COMGENEX, RT [HU/HU]; Bem RPK 33-34, H-1027 Budapest (HU).

(72) Inventors; and

(75) Inventors/Applicants (for US only): DREES, Beth, E. [US/US]; 603 Sixth Avenue, Salt Lake City, UT 84103 (US). CHAKRAVARTY, Leena [IN/US]; 9462 South Hunts End Drive, Sandy, UT 84092 (US). PRESTWICH, Glenn, D. [US/US]; 1500 South Sunnydale Lane, Salt Lake City, UT 84108 (US). DORMAN, Gyorgy [HU/HU]; Kondorsi UT, H-1119 Budapest (HU). KAVECZ, Marianne [HU/HU]; Erdody-Palffy Tamas U. 46, H-8100 Varpalota (HU). LUKACS, Andras [HU/HU]; Wesselényi, U. 69 1/3, H-1077 Budapest (HU). URGE, Laszlo [HU/HU]; Kerekgyarto U.3, H-1147 Budapest (HU). DARVAS, Ferenc [HU/HU]; Zapor U. 11/B., H-1034 Budapest (HU). RZEPECKI, Piotr, W. [PL/US]; 241

North Main Street Apt 214, Salt Lake City, Utah 84103 (US). FERGUSON, Colin, G. [CA/US]; 155 1st Ave #6, Salt Lake City, Utah 84103 (US).

(74) Agents: WESTERN, M., Wayne et al.; Thorpe North & Western LLP, P.O.Box 1219, Sandy, UT 84091-1219 (US).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— without international search report and to be republished upon receipt of that report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: COMPOUNDS HAVING INHIBITIVE ACTIVITY OF PHOSPHATIDYLINOSITOL 3-KINASE AND METHODS OF USE THEREOF

(57) Abstract: Compounds inhibiting phosphatidylinositol 3-kinase (PI 3-K) activities and methods of preparing and using thereof in treating diseases are disclosed. Compounds inhibiting PI 3-K activity and methods of using PI 3-K inhibitory compounds to inhibit cancer cell growth or to treat disorders of immunity and inflammation, in which PI 3-K plays a role in leukocyte function are also provided.